

Superfund Records Center
SITE: Wells @ 21#
BREAK: 3.2
OTHER: 549614

MEMORANDUM



SDMS DocID

549614

TO: J. Lawson

MEMO NO.: 102-APP-294

FROM: A. Paradice

FILE: 0005-407

SUBJECT: Unifirst, Woburn

DATE: 9/30/87

The results for the analysis of various Water samples received from the Unifirst, Woburn site, on 9/1/87 are attached. The cost for these analyses is \$1,080.

A. Paradice

APP/eps

cc:

memo only

P. Pelletier

M. Sparlin

Report Gen.

+ disposition letter

M. Lynn

+ report

Chemistry File

DATA AND REPORT APPROVAL FORM

SUBMITTED BY:

Analytical Chemistry Laboratory
ERT A Resource Engineering Company
33 Industrial Way
Wilmington, MA 01887
September 30, 1987

DATA SUBMITTED BY:

Thomas M. Trainor, Ph.D.



Program Manager

DATA AUDITED BY:

Marti Sparlin



Quality Control Coordinator

ERT
33 Industrial Way
Wilmington, MA 01887
(617) 657-4290

From: LABORATORY MANAGER

Date of
Issuance: September 30, 1987

Subject: SAMPLE RETENTION TERMS

Client: Unifirst, Woburn

Date Sample
Received: 9/1/87

Number of Samples
Received/Matrix: 4 Water

It is the policy of ERT to dispose of unanalyzed portions of samples thirty (30) days following submittal of the pertinent final analytical results report. This letter serves as notification that the above samples will be due for disposal. Sample extracts for organic analyses will be archived for one (1) year. Separate notification will be sent to you prior to disposal of sample extracts.

- A. ERT will return to you all unused samples at your expense (Federal Express), or
- B. ERT will maintain custody of the samples at a cost of fifteen dollars (\$15.00) per sample per quarter for refrigerated storage, and three dollars (\$3.00) per sample per quarter for ambient storage. You will be billed in advance each quarter based upon the number of samples in storage at the beginning of the quarter. The minimum storage fee per project will be fifty dollars (\$50.00) per quarter to cover administrative costs.

YOU MUST RETURN THIS LETTER TO THE LABORATORY MANAGER WITH PROPER AUTHORIZATION (i.e., Purchase Order Number, Federal Express Number, etc), SAMPLE OPTION, SIGNATURE AND DATE WITHIN THIRTY (30) DAYS OF ISSUANCE OR THE SAMPLES INDICATED ABOVE WILL BE DISPOSED.

OPTION: _____

AUTHORIZATION NO.: _____ (Federal Express)

_____ (Purchase Order)

SIGNATURE: _____

DATE: _____

VOLATILE ORGANIC COMPOUND ANALYSIS
IN WATER

Summary of Analytical Results

Method Blank Results

Quality Control Check Sample Results

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL L1st

Client Name: ERTClient ID: 47202 VC-12Laboratory ID: 5190-01Matrix: WaterSampled: 09/01/87Received: 09/01/87Authorized: 09/01/87Prepared: 09/14/87Analyzed: 09/14/87

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Reporting Limit</u>
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	ND	µg/L	5
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform -----	21	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane -----	3.6	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

ND = Not detected.

Reported by OBApproved by OB lyp

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: ERTClient ID: 47203 FBLaboratory ID: 5190-02Matrix: WaterSampled: 09/01/87Received: 09/01/87Authorized: 09/01/87Prepared: 09/14/87Analyzed: 09/14/87

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Reporting Limit</u>
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	ND	µg/L	5
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane	ND	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

ND = Not detected.

Reported by OSApproved by NS 

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: ERTClient ID: 47204 SBLaboratory ID: 5190-03Matrix: WaterSampled: 09/01/87Received: 09/01/87Authorized: 09/01/87Prepared: 09/14/87Analyzed: 09/14/87

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Reporting Limit</u>
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	ND	µg/L	5
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane	ND	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

ND = Not detected.

Reported by PSApproved by AS JS

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: ERTClient ID: 47205 VC-11Laboratory ID: 5190-04Matrix: WaterSampled: 09/01/87Received: 09/01/87Authorized: 09/01/87Prepared: 09/15/87Analyzed: 09/15/87

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Reporting Limit</u>
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	ND	µg/L	5
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform -----	16	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane -----	4.8	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

ND = Not detected.

Reported by ORApproved by WS UP

VOLATILE ORGANICS

Surrogate Recovery Summary

Client Name: ERTMatrix: WaterAuthorized: 09/01/87Received: 09/01/87

			Surrogate Compound		
Lab ID		Client ID	d ₄ -1,2-Dichloro-ethane	d ₈ -Toluene	p-Bromofluorobenzene
5190-01	VC-12	47202	91	103	99 —
5190-02	FB	47203	95	100	103 —
5190-03	SB	47204	91	100	103 —
5190-04	VC-11	47205	103	91	105 —

QC Advisory Limits:

76-114%

61-110%

74-115%

Reported by

OB

Approved by

U✓ up

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA Method 624 + 624/HSL List

QUALITY CONTROL

Client Name: ERT

Client ID: Laboratory Control Spike

Laboratory ID: 1141LCS

Matrix: Water

Prepared: 09/14/87

Analyzed: 09/14/87

<u>Parameter</u>	<u>% Recovery</u>	<u>QC Advisory Limits</u>
1,1-Dichloroethene	74	61 - 145%
Trichloroethene	86	71 - 120%
Benzene	89	76 - 127%
Toluene	86	76 - 125%
Chlorobenzene	90	75 - 130%

Reported by

QB

Approved by

WS

✓

PRIORITY POLLUTANT VOLATILE ORGANICS

EPA Method 624 + 624/HSL List

QUALITY CONTROL

Client Name: ERT

Client ID: Laboratory Control Spike Dup.

Laboratory ID: 1153LCSD

Matrix: Water

Prepared: 09/14/87

Analyzed: 09/14/87

<u>Parameter</u>	<u>% Recovery</u>	<u>QC Advisory Limits</u>
1,1-Dichloroethene	92	61 - 145%
Trichloroethene	105	71 - 120%
Benzene	98	76 - 127%
Toluene	98	76 - 125%
Chlorobenzene	103	75 - 130%

Reported by JB

Approved by RS

VP

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: ERTClient ID: Lab Procedural Blank - WaterLaboratory ID: 1140Matrix: WaterSampled: NAReceived: NAAuthorized: NAPrepared: 09/14/87Analyzed: 09/14/87

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Reporting Limit</u>
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	ND	µg/L	5
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane	ND	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

NA = Not applicable.

ND = Not detected.

Reported by OBApproved by NS ✓

HAZARDOUS SUBSTANCE LIST (HSL) VOLATILE ORGANICS

EPA Method 624/HSL List

Client Name: ERTClient ID: Lab Procedural Blank - WaterLaboratory ID: 1152Matrix: WaterSampled: NAReceived: NAAuthorized: NAPrepared: 09/14/87Analyzed: 09/14/87

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Reporting Limit</u>
Chloromethane	ND	µg/L	5
Bromomethane	ND	µg/L	5
Vinyl chloride	ND	µg/L	5
Chloroethane	ND	µg/L	5
Methylene chloride	ND	µg/L	5
Acetone	ND	µg/L	50
Carbon disulfide	ND	µg/L	2
1,1-Dichloroethene	ND	µg/L	2
1,1-Dichloroethane	ND	µg/L	2
trans-1,2-Dichloroethene	ND	µg/L	2
Chloroform	ND	µg/L	2
1,2-Dichloroethane	ND	µg/L	2
2-Butanone	ND	µg/L	10
1,1,1-Trichloroethane	ND	µg/L	2
Carbon tetrachloride	ND	µg/L	2
Vinyl acetate	ND	µg/L	10
Bromodichloromethane	ND	µg/L	2
1,2-Dichloropropane	ND	µg/L	2
trans-1,3-Dichloropropene	ND	µg/L	2
Trichloroethene	ND	µg/L	2
Dibromochloromethane	ND	µg/L	2
1,1,2-Trichloroethane	ND	µg/L	2
Benzene	ND	µg/L	2
cis-1,3-Dichloropropene	ND	µg/L	2
2-Chloroethyl vinyl ether	ND	µg/L	10
Bromoform	ND	µg/L	2
4-Methyl-2-pentanone	ND	µg/L	10
2-Hexanone	ND	µg/L	10
1,1,2,2-Tetrachloroethane	ND	µg/L	2
Tetrachloroethene	ND	µg/L	2
Toluene	ND	µg/L	2
Chlorobenzene	ND	µg/L	2
Ethyl benzene	ND	µg/L	2
Styrene	ND	µg/L	2
Total xylenes	ND	µg/L	2

NA = Not applicable.

ND = Not detected.

Reported by OBApproved by AS ✓

CHAIN-OF-CUSTODY RECORDS

UNIFIRST

WOBURN, MA

[illegible]

CHAIN OF CUSTODY RECORD

Client/Project Name <i>(Un: First)</i>			Project Location <i>Woburn MA</i>			ANALYSES						REMARKS
Project No. <i>0495-004</i>			Field Logbook No.									
Sampler: (Signature) <i>[Signature]</i>			Chain of Custody Tape No.									
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample								
<i>DC-11 DE:IL WATER</i>	<i>9/1/87</i>	<i>2:45P</i>	<i>47205</i>	<i>WATER</i>	<i>✓</i>						<i>NORMAL RUN.</i>	
Relinquished by: (Signature) <i>[Signature]</i>				Date <i>9/1/87</i>	Time <i>15:30</i>	Received by: (Signature)				Date	Time	
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time	
Relinquished by: (Signature)				Date	Time	Received for Laboratory: (Signature) <i>[Signature]</i>				Date <i>9/1/87</i>	Time	
Sample Disposal Method:				Disposed of by: (Signature)						Date	Time	
SAMPLE COLLECTOR				ANALYTICAL LABORATORY						ERT		
Environmental Research and Technology, Inc. 696 Virginia Road Concord, MA 01742 617-369-8910										Nº 9837		



SAMPLE RECEIPT CHECK LIST

Client: • UniFirst COC-407

COC Record #(s): 9890, 9837

Matrix	Container	ERT #(s)
Water	3 vials	47202-47205

1. Were samples shipped or hand-delivered?

Notes:

Yes ☒ No ☐

2. Was COC record present upon receipt of samples?

Notes:

Yes ☐ No ☒

3. Was COC tape present/unbroken on outer package?

Notes:

4. Were samples received ambient or chilled?

Notes:

Yes ☐ No ☒

5. Were any samples received broken/leaking (improperly sealed)?

Notes:

Yes ☒ No ☐

6. Were samples properly preserved?

Notes:

Yes ☐ No ☒

7. Were COC types present/unbroken on samples?

Notes:

Yes ☐ No ☒

8. Any discrepancies between sample labels and COC records?

Notes:

Yes ☒ No ☐

9. Were samples received within holding times?

Notes:

Additional Comments:

in RF

Samples inspected and logged in by

Date: 7/1/82